

WHAT IS CLAIMED IS:

1. A computer-implemented system for associating target data with a product classification schema, the system comprising a data association module operable to:

5 access the product classification schema, the schema comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, the schema further comprising ontologies associated with one or more of the classes, each ontology comprising one or more product attributes;

access the target data to be associated with the schema;

10 determine one or more classes with which at least a portion of the target data should be associated based on a comparison between the target data and the product attributes of the ontologies or between the target data and values for one or more of the product attributes; and

15 associate at least a portion of the target data with one or more classes in response to determining one or more classes with which at least a portion of the target data should be associated.

2. The system of Claim 1, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a  
20 portion of the target data including the name or an equivalent name of a product attribute included in the ontologies of these one or more classes.

3. The system of Claim 1, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a  
25 portion of the target data including values that match or are similar to values for a product attribute included in the ontologies of these one or more classes.

4. The system of Claim 1, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a  
30 portion of the target data including a range of values that matches or is similar to a range of values for a product attribute included in the ontologies of these one or more classes.

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5           5.       The system of Claim 1, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including symbols that match or are similar to symbols associated with values for a product attribute included in the ontologies of these one or more classes.

10           6.       The system of Claim 1, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data having formatting that matches or is similar to formatting of values for a product attribute included in the ontologies of these one or more classes.

15           7.       The system of Claim 1, wherein determining one or more classes with which at least a portion of the target data should be associated comprises using vector space analysis to identify multiple portions of the target data including values that correspond to values for multiple product attributes included in the ontologies of these one or more classes.

20           8.       The system of Claim 1, wherein determining one or more classes with which at least a portion of the target data should be associated comprises using statistical correlation techniques to identify portions of the target data including values that correspond to values for a product attribute included in the ontologies of these one or more classes.

25           9.       The system of Claim 1, wherein the values for one or more of the product attributes with which the target data may be compared are stored in one or more seller databases, the values in the seller databases being identified by one or more pointers associated with one or more classes of the schema.

30           10.      The system of Claim 1, wherein associating at least a portion of the target data with one or more classes comprises associating one or more pointers to the target data with the one or more classes.

11. The system of Claim 1, wherein associating at least a portion of the target data with one or more classes comprises associating one or more pointers to specific portions of the target data with one or more product attributes included in the ontology of the one or more classes.
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12. A method for associating target data with a product classification schema, comprising:

accessing the product classification schema, the schema comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, the schema further comprising ontologies associated with one or more of the classes, each ontology comprising one or more product attributes;

accessing the target data to be associated with the schema;

determining one or more classes with which at least a portion of the target data should be associated based on a comparison between the target data and the product attributes of the ontologies or between the target data and values for one or more of the product attributes; and

associating at least a portion of the target data with one or more classes in response to determining one or more classes with which at least a portion of the target data should be associated.

13. The method of Claim 12, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including the name or an equivalent name of a product attribute included in the ontologies of these one or more classes.

14. The method of Claim 12, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including values that match or are similar to values for a product attribute included in the ontologies of these one or more classes.

15. The method of Claim 12, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including a range of values that matches or is similar to a range of values for a product attribute included in the ontologies of these one or more classes.

16. The method of Claim 12, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including symbols that match or are similar to symbols associated with values for a product attribute included in the ontologies of these one or more classes.

17. The method of Claim 12, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data having formatting that matches or is similar to formatting of values for a product attribute included in the ontologies of these one or more classes.

18. The method of Claim 12, wherein determining one or more classes with which at least a portion of the target data should be associated comprises using vector space analysis to identify multiple portions of the target data including values that correspond to values for multiple product attributes included in the ontologies of these one or more classes.

19. The method of Claim 12, wherein determining one or more classes with which at least a portion of the target data should be associated comprises using statistical correlation techniques to identify portions of the target data including values that correspond to values for a product attribute included in the ontologies of these one or more classes.

20. The method of Claim 12, wherein the values for one or more of the product attributes with which the target data may be compared are stored in one or more seller databases, the values in the seller databases being identified by one or more pointers associated with one or more classes of the schema.

21. The method of Claim 12, wherein associating at least a portion of the target data with one or more classes comprises associating one or more pointers to the target data with the one or more classes.

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22. The method of Claim 12, wherein associating at least a portion of the target data with one or more classes comprises associating one or more pointers to specific portions of the target data with one or more product attributes included in the ontology of the one or more classes.

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23. Software for associating target data with a product classification schema, the software operable to:

access the product classification schema, the schema comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, the schema further comprising ontologies associated with one or more of the classes, each ontology comprising one or more product attributes;

access the target data to be associated with the schema;

determine one or more classes with which at least a portion of the target data should be associated based on a comparison between the target data and the product attributes of the ontologies or between the target data and values for one or more of the product attributes; and

associate at least a portion of the target data with one or more classes in response to determining one or more classes with which at least a portion of the target data should be associated.

24. The software of Claim 23, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including the name or an equivalent name of a product attribute included in the ontologies of these one or more classes.

25. The software of Claim 23, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including values that match or are similar to values for a product attribute included in the ontologies of these one or more classes.

26. The software of Claim 23, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including a range of values that matches or is similar to a range of values for a product attribute included in the ontologies of these one or more classes.

27. The software of Claim 23, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data including symbols that match or are similar to symbols associated with values for a product attribute included in the ontologies of these one or more classes.

28. The software of Claim 23, wherein determining one or more classes with which at least a portion of the target data should be associated comprises identifying a portion of the target data having formatting that matches or is similar to formatting of values for a product attribute included in the ontologies of these one or more classes.

29. The software of Claim 23, wherein determining one or more classes with which at least a portion of the target data should be associated comprises using vector space analysis to identify multiple portions of the target data including values that correspond to values for multiple product attributes included in the ontologies of these one or more classes.

30. The software of Claim 23, wherein determining one or more classes with which at least a portion of the target data should be associated comprises using statistical correlation techniques to identify portions of the target data including values that correspond to values for a product attribute included in the ontologies of these one or more classes.

31. The software of Claim 23, wherein the values for one or more of the product attributes with which the target data may be compared are stored in one or more seller databases, the values in the seller databases being identified by one or more pointers associated with one or more classes of the schema.

32. The software of Claim 23, wherein associating at least a portion of the target data with one or more classes comprises associating one or more pointers to the target data with the one or more classes.



33. The software of Claim 23, wherein associating at least a portion of the target data with one or more classes comprises associating one or more pointers to specific portions of the target data with one or more product attributes included in the ontology of the one or more classes.

34. A system for associating target data with a product classification schema, the system comprising:

means for accessing the product classification schema, the schema comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, the schema further comprising ontologies associated with one or more of the classes, each ontology comprising one or more product attributes;

means for accessing the target data to be associated with the schema;

means for determining one or more classes with which at least a portion of the target data should be associated based on a comparison between the target data and the product attributes of the ontologies or between the target data and values for one or more of the product attributes; and

means for associating at least a portion of the target data with one or more classes in response to determining one or more classes with which at least a portion of the target data should be associated.

35. A computer-implemented system for associating target data with a product classification schema, the system comprising a data association module operable to:

5 access the product classification schema, the schema comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, the schema further comprising ontologies associated with one or more of the classes, each ontology comprising one or more product attributes;

access the target data to be associated with the schema;

10 determine one or more classes with which at least a portion of the target data should be associated based on a comparison between the target data and the product attributes of the ontologies or between the target data and values for one or more of the product attributes, the values being stored in one or more seller databases and identified by one or more pointers associated with one or more classes of the schema; and

15 associate at least a portion of the target data with one or more classes in response to determining one or more classes with which at least a portion of the target data should be associated, the target data being associated with the classes using one or more pointers to the target data.

accessing the product classification schema, the schema comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, the schema further comprising ontologies associated with one or more of the classes, each ontology comprising one or more product attributes;

accessing the target data to be associated with the schema:

determining one or more classes with which at least a portion of the target data should be associated based on a comparison between the target data and the product attributes of the ontologies or between the target data and values for one or more of the product attributes, the values being stored in one or more seller databases and identified by one or more pointers associated with one or more classes of the schema; and

associating at least a portion of the target data with one or more classes in response to determining one or more classes with which at least a portion of the target data should be associated, the target data being associated with the classes using one or more pointers to the target data.

37. Software for associating target data with a product classification schema, the software operable to:

access the product classification schema, the schema comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, the schema  
5 further comprising ontologies associated with one or more of the classes, each ontology comprising one or more product attributes;

access the target data to be associated with the schema;

determine one or more classes with which at least a portion of the target data should be associated based on a comparison between the target data and the product  
10 attributes of the ontologies or between the target data and values for one or more of the product attributes, the values being stored in one or more seller databases and identified by one or more pointers associated with one or more classes of the schema;  
and

associate at least a portion of the target data with one or more classes in  
15 response to determining one or more classes with which at least a portion of the target data should be associated, the target data being associated with the classes using one or more pointers to the target data.

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